

RIVER STAGES AND FLOODS FOR MARCH 1947

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Precipitation during March was above normal in the southern States, from southeastern Virginia through Texas and in Kansas and adjacent areas of bordering States. It was also above normal in Montana and parts of Wyoming, Idaho, Washington, and Oregon. More than twice the usual amounts fell along the coasts of South Carolina and Georgia, central Florida, and over small areas in Louisiana, eastern Texas, northeastern Kansas, northwestern Missouri, and southeastern Nebraska. It was unusually dry in the Middle Atlantic States, the Tennessee and Ohio Valleys, the Dakotas, and the Southwest.

Severe flooding occurred in the upper Missouri River and tributaries as a result of severe ice jams; run-off of more than 500 percent of normal was reported in eastern Kansas; and floods occurred in some streams of Louisiana and eastern Texas.

Atlantic Slope drainage.—Stages slightly above flood level were reached on two occasions during the month on the tributaries of the Susquehanna River in New York. The rises in both instances were caused by the melting of snow during warm periods of weather. Flood flows were not heavy, and no damage was reported. Flood stages were exceeded slightly at several stations along the South Atlantic coastal streams. Overflow was minor and no material damage was reported.

East Gulf of Mexico drainage.—Flooding was quite general in the Gulf Streams of Alabama and Mississippi. There were two periods of heavy rainfall: the first, from March 4–8, caused the streams to rise to moderate flood stages; streams were still high on the 13th and 14th when heavy rain again fell. Additional run-off from the latter rain either prolonged the high stages or caused further rises in streams. Principal streams affected were the Choctawhatchee, Black Warrior, Tombigbee, and Pearl Rivers. There was some damage to highways and bridges, but crops had not been planted and hence were not affected except for the delay in planting. The heavy rains did cause serious erosion damage to crop lands.

Floods in the Missouri Basin.—Severe floods accompanied the spring break-up on the upper Missouri River and tributaries. Floods on many tributaries were the highest of record; damage, especially to farm lands, property, highways, and bridges, was extensive. The United States Geological Survey reported that preliminary estimates showed peak discharges at several gaging stations on the upper Missouri River greater than those recorded in the flood of April 1943.

High stages were reached on southern tributaries of the Yellowstone River, especially on the Powder River. About half the city of Broadus, Mont., was inundated on March 18, forcing about 300 persons to leave their homes. The ice jam went out on March 19, and conditions were near normal again by March 21. No gage readings are available for Broadus.

Ice jams on the Yellowstone River, from Billings, Mont., to the mouth of the river, caused flooding of farmlands, with the worst flooding occurring from Glendive, Mont., to the mouth. There was a threat of serious flooding at

Miles City, but the ice moved out quickly on March 22, allowing the water that had inundated about 1,000 acres of farm land in that section to move downstream.

In North Dakota, the Little Missouri, Cannonball, Heart, and Missouri Rivers caused considerable overflow. An ice jam formed on the Little Missouri River on March 25, south of Watford City and about 60 miles north of Medora. The ice and water were reported to be 8 feet higher than ever known before at this point. An ice jam also formed on the Heart River south of Glen Ullin, and on March 26, the water began going over the protecting dike at Mandan. Some flooding occurred in the south part of the town, but sandbags placed on the dikes by Army Engineers and local people saved heavy damage from flooding in larger areas of lowlands; the jam broke before serious damage occurred. At Glen Ullin, the peak stage was a little more than a foot higher than the previous maximum. The Cannonball River ice took out several bridges and flooded highways because the bridges could not accommodate the ice and water. Record stages were not reached on this stream.

Flood stages were reached on the Missouri River from the mouth of the Yellowstone River to the southern border of South Dakota. The flood waters from the Yellowstone River began flooding the bottomlands near Williston, N. Dak., on March 22. The river broke there late in the afternoon, with a crest stage of 17.8 feet. At Spanish Point, near Williston, water 15 feet deep rolled over the bottomlands from the Missouri River. At Sanish, N. Dak., the river was unusually high: it was 6 feet over Highway No. 23 on the west side of the river. The water rose rapidly and receded rapidly after the crest passed. The ice broke up at Elbowoods late in the afternoon of March 26, after the stage had risen to 23.1 feet, a rise of 11.0 feet in 24 hours.

At Bismarck, N. Dak., the ice broke about noon on March 28, and the river crested early on the 29th at a stage of 22.8 feet measured on the Weather Bureau gage. Buildings along the river above and below Bismarck were covered by the flood waters, but only the lowest part of the city itself was flooded. A few houses had water over the floors, but no houses were completely covered. The flood damage along the Missouri River was spotted because the ice was about 2 feet thick and quite solid. The water built up behind the ice until the ice broke for some distance downstream; then the ice held again until another head of water built up. Much flooding occurred behind these temporary ice jams. In South Dakota, the peak stages were generally slightly less than stages recorded in the 1943 flood, and only minor flooding occurred on the main stream below the southern border of South Dakota.

Arkansas Basin.—Minor flooding occurred at four stations in Kansas on the Neosho River and at Emporia, Kans., on the Cottonwood River. Little damage resulted.

Red Basin.—The Sulphur River in Texas exceeded flood stage slightly on two occasions during the month, but damage was negligible.

West Gulf of Mexico drainage.—There was light overflow of most streams in Louisiana and eastern Texas; very little damage resulted.

FLOOD STAGE REPORT FOR MARCH 1947

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages— dates		Crest ¹	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE					
Lake Erie					
St. Joseph: Montpeller, Ohio.....	Feet 10	25	29	Feet 11.5	27
ATLANTIC SLOPE DRAINAGE					
Tloughnoga: Whitney Point, N. Y.....	12	25	26	13.1	25
Chenango:					
Sherburne, N. Y.....	8	25	27	9.1	25
Greene, N. Y.....	8	25	27	9.5	25
Binghamton, N. Y.....	16	25	26	16.3	26
Susquehanna:					
Oneonta, N. Y.....	12	15	17	14.4	15
Bainbridge, N. Y.....	13	25	26	13.4	26
Vestal, N. Y.....	14	15	16	14.6	15
		25	27	18.0	25
Conklin, N. Y.....	11	15	16	12.9	15
		25	26	13.4	26
James: Columbia, Va.....	10	15	18	17.0	18
Roanoke:					
Williamston, N. C.....	10	16	25	11.0	21
Altavista, Va.....	10	15	15	10.8	15
Neuse: Neuse, N. C.....	14	16	16	14.2	16
Cape Fear: Elizabethtown, N. C.....	20	10	11	20.5	11
Pee Dee: Mars Bluff Bridge, S. C.....	17	11	14	17.6	14
Broad: Blairs, S. C.....	14	9	9	15.7	9
Santee: Rimini, S. C.....	12	11	(?)	14.0	14
Savannah: Butler Creek, Ga.....	21	8	10	23.0	9
Ogeechee:					
Midville, Ga.....	6	10	15	7.4	12
Dover, Ga.....	7	10	27	9.8	16
Ocmulgee:					
Macon, Ga.....	18	7	10	23.0	8
Hawkinsville, Ga.....	25	11	13	26.4	12
Abbeville, Ga.....	11	11	23	15.6	14
Oconee:					
Milledgeville, Ga.....	20	6	11	28.8	8
Dublin, Ga.....	21	10	15	25.4	12
Mount Vernon, Ga.....	16	12	20	19.5	14
Altamaha:					
Charlotte, Ga.....	12	11	(?)	20.6	18
Piney Bluff, Ga.....	17	14	26	20.8	19
EAST GULF OF MEXICO DRAINAGE					
Flint: Albany, Ga.....	20	10	10	22.2	10
		13	16	23.7	14
Appalachicola: Blountstown, Fla.....	15	9	(?)	20.7	13, 18
Choctawhatchee:					
Newton, Ala.....	19	8	9	23.2	9
Geneva, Ala.....	23	9	11	27.6	10
Caryville, Fla.....	12	9	19	14.4	10-11
Black Warrior:					
Tuscaloosa, Ala.....	47	9	10	49.7	9
Lock No. 7, Eutaw, Ala.....	35	9	19	42.1	12
Tombigbee:					
Gainsville, Ala.....	36	14	17	38.2	15
Demopolis, Ala.....	39	9	22	51.2	17
Lock No. 3, Ala.....	33	8	30	52.8	18-19
Lock No. 2, Ala.....	46	11	23	54.2	20
Lock No. 1, Ala.....	31	11	29	36.6	20-22
Pascagoula: Merrill, Miss.....	23	9	12	22.3	11
		14	14	22.0	14

FLOOD STAGE REPORT FOR MARCH 1947—Continued

River and station	Flood stage	Above flood stages— dates		Crest ¹	
		From—	To—	Stage	Date
EAST GULF OF MEXICO DRAINAGE—con.					
Pearl:	Feet			Feet	
Jackson, Miss.....	18	12	30	24.0	21
Monticello, Miss.....	16	13	19	18.0	15
Columbia, Miss.....	17	16	17	17.5	16
Pearl River, La.....	12	8	(?)	15.9	15
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Whitewater: Beaver, Minn.....	7	24	24	8.0	2
Missouri Basin					
Grand:					
Chillicothe, Mo.....	18	13	15	26.7	13
Brunswick, Mo.....	12	15	15	12.2	15
Ozage:					
Quenemo, Kans.....	30	13	14	35.1	13
Ottawa, Kans.....	24	13	16	29.5	14
Osawatomie, Kans.....	28	13	17	33.6	16
LaCygne, Kans.....	25	14	18	28.8	17-18
Trading Post, Kans.....	24	15	19	25.5	18
Missouri:					
Washburn, N. Dak.....	22	28	28	22.5	28
Bismarck, N. Dak.....	19	29	29	22.8	29
Mobridge, S. Dak.....	16	31	(?)	18.0	31
Ohio Basin					
Ohio: Dam No. 50, Fords Ferry, Ky....	34	Feb. 4	Feb. 8	35.3	Feb. 6
Arkansas Basin					
Cottonwood: Emporia, Kansas.....	20	14	16	22.6	15
Neosho:					
Burlington, Kans.....	27	16	16	28.2	16
Iola, Kans.....	15	14	14	15.5	14
Le Roy, Kans.....	23	13	13	23.3	13
Neosho Rapids, Kans.....	22	15	15	23.6	15
Red Basin					
Sulphur:					
Hagansport, Tex.....	38	13	13	38.0	13
		20	20	38.3	20
Naples, Tex.....	22	17	19	23.0	18
		24	26	22.8	25
WEST GULF OF MEXICO DRAINAGE					
Vermillion: Lafayette, La.....	14	13	14	14.2	13
Nexplaque: Basile, La.....	22	15	18	23.6	16
Mermontean: Mermontean, La.....	5	14	21	6.1	17
Calcasieu: Kinder, La.....	16	14	17	17.0	15
Sabine:					
Logansport, La.....	25	17	19	25.6	18
Bon Weir, Tex.....	17	14	21	19.3	14
Neches:					
Rockland, Tex.....	22	15	17	22.8	16
Evadale, Tex.....	16	17	(?)	17.1	23
East Fork: Rockwall, Tex.....	10	20	21	11.4	21
		25	26	11.6	26
Trinity: Liberty, Tex.....	24	14	25	27.4	17-18

¹ Provisional.² Continued at end of month.